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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,465	01/22/2004	Kiyonori Moroto	2018-833	4389
23117	7590	11/23/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			LE, DANG D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/761,465

Applicant(s)

MOROTO ET AL.

Examiner

Dang D. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 27-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-17 and 27-29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-6, 14-17, 27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Schill et al. (DE 43 38 345 A1).

Regarding claim 1, Schill et al. shows a motor for a fuel pump (Figure 1) comprising:

- a permanent magnet (21) formed from a plurality of magnetically differing poles disposed in an alternating and circumferential fashion;
- an armature (23) rotatably disposed within an inner circumference of the permanent magnet, the armature having coils wound thereabout; and
- a commutator (33, also see Figure 2) comprising a plurality of segments disposed in a direction of rotation and electrically connected to the coils (14) wound around the armature, the segments mutually adjacent in the direction of rotation and being mutually insulated;

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- a brush (33) successively contacting each of the segments due to rotation of the armature; and
- a capacitor (47, Figures 2 and 4) electrically connected to a circuit including the commutator and the armature, wherein the capacitor stores electromagnetic energy released by the coils during rotation of the armature to prevent occurrence of discharge between the brush and the segments, wherein the commutator and the armature comprises a rotating member, and wherein the capacitor is disposed inside (Figures 2 and 4) the rotating member so as not to be disposed on a peripheral surface of the rotating member.

Regarding claims 3-6, 14-17, 27, and 29, it is noted that Schill et al. also shows all of the limitations of the claimed invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schill et al. in view of Zepp et al. (6,880,229).

Regarding claims 2 and 11, Schill et al. shows all of the limitations of the claimed invention except for a center core; and an outer core, wherein the center core and the outer core are joined by a joint such that when successive outer cores are joined to the center core, the coil, when wound, forms a trapezoidal shape.

Zepp et al. shows a center core (2'); and an outer core (10'), wherein the center core and the outer core are joined by a joint such that when successive outer cores are joined to the center core, the coil, when wound, forms a trapezoidal shape for the purpose of allowing inserting of pre-wound coils.

Since Schill et al. and Zepp et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the armature with a center core; and an outer core, wherein the center core and the outer core are joined by a joint such that when successive outer cores are joined to the center core, the coil, when wound, forms a trapezoidal shape as taught by Zepp et al. for the purpose discussed above.

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7. Claims 7-10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schill et al. in view of Matsushita (5,157,294).

Regarding claims 7 and 28, Sakuma et al. shows all of the limitations of the claimed invention except for a recessed portion being formed in the armature near the commutator, and the capacitor is disposed so as to project on a side of the commutator nearest the armature and is located in the recessed portion.

Matsushita shows a recessed portion (between poles 3-1 to 3-4) being formed in the armature (3) near the commutator, and the capacitor (5) being located in the recessed portion for the purpose of reducing electromagnetic noise.

Since Schill et al. and Matsushita are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to dispose the capacitor in a recessed formed in the armature as taught by Matsushita for the purpose discussed above.

Regarding claims 8-10, it is noted that Schill et al. and Matsushita also show all of the limitations of the claimed invention.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schill et al. in view of Bahn (5,498,919).

Regarding claim 12, the motor of Schill et al. shows all of the limitations of the claimed invention except for the star connection.

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Bahn shows the armature windings can be connected with star connection or delta connection for the purpose of preventing unbalance voltage.

Since Schill et al. and Bahn are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use star connection as taught by Bahn for the purpose discussed above.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schill et al.

Regarding claim 13, Schill et al. shows all of the limitations of the claimed invention except for capacity of the capacitors between $0.02 * O * P$ and $0.2 * O * P$.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set capacity of the capacitors between $0.02 * O * P$ and $0.2 * O * P$, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

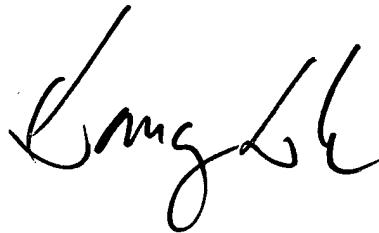
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D. Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

11/17/05

A handwritten signature in black ink, appearing to read "Dangle", written in a cursive style.

**DANGLE
PRIMARY EXAMINER**